

# [INTEGRATED RADIO-FREQUENCY RECEIVER]

## Abstract of Disclosure

An integrated radio frequency receiver, having a local oscillator, a mixer apparatus, a phase-shift apparatus, and an analog-to-digital conversion apparatus. The local oscillator is used to generate a local oscillation signal. The mixer mixes, filters and amplifies a radio-frequency carrier input signal and the local oscillation signal to output the first amplified and second amplified signals. The phases of the first and second amplified signals are shifted with first and second degrees as first and second output phase-shifted signals, respectively. The analog-to-digital conversion apparatus then performs analog-to-digital conversion on the first amplified and the second phase-shifted signal, and the second amplified and first phase-shifted signal to output an in-phase signal and an orthogonal-phase signal, respectively.

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